EDUCATION EVENT REPORT AND RECOMMENDATIONS

Attendee's Name:	Joseph Kerski	Title: Geographer: Education
Location:	San Diego CA	
Other USGS Exhibitors:	RMMC:	Joseph Kerski, Bill Smith, Carol Giffin, Susan Goplen, John Kosovich
	WMC:	Nancy Tubbs, Diane Garcia, Alan Vaughn, Robert Marinaro, Alexander Evans, Vicki Lukas
Trip Date(s):	26-30 July 1999	
Purpose of Travel:	19th Annual ESRI User Conference:	

1. Operate USGS Exhibit at Conference
2. Conduct 2 Presentations
3. Conduct 2 user demonstrations
4. Operate USGS Exhibit at GeoExplorations Education Fair

Summary:

Although the USGS has participated in the annual ESRI conference for each year almost since its inception in 1980, this is only the second opportunity that we have had to operate an exhibit at the conference. Billed as the "largest GIS conference in the world", this conference attracted over 9,500 people, an increase of 3,500 from 1997. Next year's attendance target is 10,000. By participating, we sought to demonstrate the leadership that the USGS has in geospatial standards, research, partnerships, and in digital data such as NHD that users can and have used in their work.

The theme of the conference was "Sharing Geographic Information." The role of geographic data, partnerships, and research is central to the USGS and in particular to the National Mapping Program. Our presence at this conference capitalized on this theme, and visitors crowded to our exhibit, sometimes standing 3 or 4 people deep.

Our exhibit booth fee of $2,500 was waived by the ESRI staff, and the space was in the nonprofit area with other federal agencies (BLM, USFS) and professional societies (URISA, GITA) the San Diego Convention Center. Our theme at the exhibit was "USGS Geographic Research" and included flyers on research projects, partnerships, the National Hydrography Dataset, and other items (see below). Our exhibit included two laptops. Digital demonstrations included ArcView and PowerPoint demonstrations on NHD, partnerships, status graphics query, computer video of remote sensing data, digital data formats, and digital data applications. The most frequent questions were on how to format our data to use with ESRI software, and availability and cost for NHD data.

I conducted two presentations on the use of GIS and USGS digital data to enhance the secondary geography curriculum. This formed part of an expanding GIS in Education conference theme, which included 2 full days of presentations.

I was also invited to participate in the GeoExplorations Education Fair by the ESRI staff. This expo was targeted at instructors at all levels, from primary to university, primarily from

Southern California. This was very well received, as all the educational materials I brought to the expo were distributed in the two hours allotted. I ran several computer demos illustrating how USGS digital map and real-time data can be used in the curriculum. One of the lessons I wrote is on

http://rockyweb.cr.usgs.gov/public/outreach/quakegis/.

Recommendations/Observations:

1) During the plenary session, attended by at least 4,000, ArcInfo version 8 was highlighted, among other ESRI software. It was clear that WWW serving of geographic data comprises a large share of ESRI R&D, which has implications for how USGS customers will come to expect our data to be distributed in the future. **It was notable that Jack Dangermond chose one video to show at the plenary session, and its subject was "GIS In Education."** This is a topic that we have been pursuing for years, and one that I think will be an even more important role for the USGS in the future. See my notes on the ED-GIS III conference, which occurred 2 days prior to the ESRI conference.

2) The digital demonstrations, backdrop posters, and handout materials with which we operated the USGS exhibit were excellent. The staffing was handled by a combination of RMMC and WMC personnel. See the file below for an itemized listing of the items shown at the conference. The number of items were nearly perfect; we might increase the number of California indexes next time.

3) The main concern still is that several key GIPs and fact sheets that are used in national mapping program outreach activities are out of stock. This includes the folded version of Map Projections, GIS, and fact sheets on WWW, DOQs, DRGs, and DLGs. The fact sheets have been copied for each conference lately, which is quite time consuming since hundreds of copies are necessary. The GIPs are, of course, not suitable to be copied, so we have to do without. Recent improved links between the outreach teams and the publications (Publications Interest Group) effort at the USGS will improve this situation in the future, but funding for these publications remains an issue.

4) The exhibitors were well-equipped to handle the technical nature of this audience. They had experience in using and manipulating USGS data, were familiar with data and services from NMD and other divisions, and were those who work well with the public. We have a great many of these types of individuals at the USGS, and I am proud to work with them.

5) This conference was a joint venture between RMMC and WMC, and showed how effective a cross-center outreach effort can be.

6) I once again recommend that the ESRI conference be placed on the list of conferences supported by headquarters. If this is added, candidates to drop include the GITA, ASPRS, or ACSM conferences. The ESRI conference is larger, and while it does exclude MapInfo and Intergraph, the international and partnership nature of this event make it one to consider over smaller venues. For next year, I will pursue obtaining the exhibit space for free once again. However, I believe even the $2500 fee would be worthwhile if we can cancel our exhibit at a different conference and use the funds for ESRI.

7) Our laptops, which all date (at RMMC) from 1996, are a serious problem, particularly at a high-tech conference such as ESRI. In addition, we do not have the latest version of ArcView

and will soon be 2 versions behind. We also need more memory on these laptops if we want to run 3D Analyst and Image Analyst in the future.

Acknowledgments:

I wish to thank Diane Garcia, Bill Kaiser, Carol Giffin, Vicki Lukas, Nancy Tubbs, Bob Marinaro, and Bill Smith, for assistance in setting up and staffing the USGS exhibit; Mara Tongue, and Vicki Lukas in planning the event; Gary Kress for assisting me with materials ordering and copying; Lisa Kok for status graphics; Dave Hester for Middle Rio Grande data and posters, Sherry Durst for NHD data and posters, and Mark Ely with help with the education fair. If I have neglected anyone from the acknowledgements, know that I am appreciative of all help for this worthwhile event.

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Outreach Plan for 1999 ESRI Users Conference 19 July 1999 version

Location: San Diego Convention Center, California
Type of Event: International GIS / Spatial Data Applications conference for ESRI Users

The USGS will be represented by 1 exhibit -- BOOTH 155 - in nonprofit area.
We will also participate in the Education Expo, 2 user demo areas, and at least 2 presentations: (Kerski)

Floor Plan of Exhibit Hall: http://www.esri.com/events/uc/exhibhall.html

Staffing:

from RMMC: Joseph Kerski
Carol Giffin
Bill Smith
Carl Rich
Eldon Jessen
John Kosovich
Susan Goplen
Paul Wiese
Bill Kaiser

from WMC: Diane Garcia
Vicki Lukas
Nancy Tubbs

Other activities: Paper presentation (Kerski)
Paper presentation (Kerski and Wanner)
User Demo Area (Kerski)
Participate in GIS Education Expo (Kerski)

Passes:

Names for Free Passes (exhibitors):
Joseph Kerski

Diane Garcia
Vicki Lukas
Nancy Tubbs

All other staffpersons are paying for registration.

Staging:

WMC will pay for drayage. We shipped most materials to the conference site on 8 Jul 1999. Joseph sent several boxes to the hotel and will pick them up on Friday 23 Jul.

Equipment and Furnishings:

Proposal:

WMC:	Telephone line for Internet:	$200.00	
	We will use Earthlink ISP for Internet connection.		
	Electrical	$110.00	
	Monitor		
	Joseph working on obtaining one free from Digital, Inc., If it does not work out, we will rent one at conf site.		
	Drayage:	$ TBD	
	Total:	**$ 310 + $300 (drayage est)**	
RMMC:	Carpet	$ 96.00	
	2 stools	$ 102.00	
	Table	$ 89.50	
	Wastebasket	$ 15.00	
	Total w/tax	$ **325.95**	

Staffing Schedule. Need 2-3 people in exhibit at all times.

Mon 26 July 1999	Tue 27 July 1999	Wed 28 July 1999	Thu 29 July 1999
	9am - 6pm: set up ---------- Paper presentation 1: Kerski: 830am 4 - 8 pm - GIS Education Expo (Kerski)	9am-6pm: Staff exhibit. 9am Lee Smith 10am Lee Smith 11am Giffin Smith 12noon Giffin Lukas Goplen 1pm Cruse Kerski 2pm Cruse Kosovich 3pm Tubbs Kosovich 4pm Tubbs Kaiser 5pm Evans Sealey ---------- Paper Presentation 2: Kerski 830am	9am - 130pm: Staff exhibit 9am Lugo Smith 10am Lugo Smith 11am Garcia Smith 12noon Garcia Kerski Lukas 1pm Garcia Giffin Kerski Smith ---------- 130pm-6pm: Tear down exhibit. Giffin Kerski Smith Tubbs Garcia ---------- 9am and 10am - User demo (Kerski)

Audience:

International focus!

Core Customers: planners, engineers, and scientists in environmental science, energy, utilities, wastewater treatment, hydrology, GIS, demographics, marketing, satellite imaging, transportation, land use.

Non-Core Customers: Educators, business; realtors, marketers; insurance..

Personnel required: Experience working with the public, and knowledgeable about:

(1) cooperative agreements,
(2) digital data availability, ordering information, scales, and formats.
(3) use of USGS digital data with GIS and remote sensing software in all applications, including government, business, and education.
(4) USGS products and services with emphasis on satellite images, digital imagery, photography, digital data

Presentations:

(1) The Effectiveness of GIS in High School Education

by

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Abstract

Concrete evidence of the effectiveness of geographic information systems (GIS) in the curriculum is lacking. Research concerning the effectiveness of GIS technology and methods

has been confined chiefly to anecdotal evidence from classroom observation. Experiments conducted in geography and special education courses in Boulder High School, Boulder Colorado USA, provide some of the first empirical and case study data as to the effectiveness of GIS in teaching spatial and temporal relationships. Preliminary evidence suggests that students working with GIS demonstrate increased use of maps as analytical tools.

(2) A Nationwide Analysis of the Implementation of GIS in High School Education

Joseph J. Kerski

Abstract

A survey of 1,500 American high schools which have adopted geographic information systems (GIS) software provides insight to the implementation of the technology in secondary education. The survey provides some of the first comprehensive data on the geographic and curricular extent to which GIS is being implemented, why and how GIS is being implemented, forces that motivate teachers to adopt GIS, and the benefits and challenges of adoption of the technology. The survey suggests that technological barriers to the adoption of GIS may be less important than social and structural barriers.

Action items:

Joseph
- Submit proposed materials list
- **Order materials - 7 June 1999**
- Plot signs and other materials
- Process digital data
- Arrange workshop digital presentation
- Conduct presentation
- Ship publications rack to conf site - Planned on 7-20-99
- Ship materials to conf site - Planned on 7-20-99

Mara/Vicki/Giffin
- Review proposed materials list DONE
- Assemble appropriate digital data
- Assemble C&R notebook
- Arrange for transport of backdrop and monitor

All
- Plot posters and signs

All
- Staff exhibit

Display Items that USGS will take:
- Laptop computer **1 from RMMC (Kerski) and 1 from WMC** (2)

with ArcView datasets:
Digital data uses and applications:
Imperial Beach DOQ-DRG-DEM-DLG
Las Vegas LULC data with DOQ/DRG/DEM/DLG
Golden CO: floodplain, addresses, zoning, habitat
Austin W TX: 5 vs 30m DEM, DRG, DLG, DOQ
Idaho Springs CO: DLG with OMO zoning, LULC,
infrastructure (water lines, parcels, curbs, etc)
CDs: DOQ, DRG, 1:2M DLG, Presentations Disk
NHD demo
LULC
Hazards applications
Transboundary data: Imperial Beach, Progreso, El Paso
DDS--3D model of Powder River Basin
DDS--Great Basin Geosciences Database
.AVI animations with sound: USGS Satellite Imagery, and other topics
MapInfo Status Graphics
PowerPoint slide shows, including Vicki's DOQ slideshow, transboundary
WWW pages saved locally

Exhibit Theme:
USGS Geographic Research for a Changing World

Computers:

1 monitor (rental or from Digital)
2 laptops (Joseph & 1 other <-- we need this)
1 laptop will be connected to the Internet.

Backdrop:

Overview poster from WMC

Rotate each day - possibly

DRG/DOQ poster (Lance-Bill)
Mt St Helens DEM plot
Front Range Infrastructure Research poster
Abandoned Mine Lands Poster
Lake Tahoe Poster
Urban Hazards Poster
Middle Rio Grande Poster
San Diego DOQ on photographic paper (Joseph order from EDC)
Imperial Beach DOQ on photographic paper
Mojave Ecosystem

Materials to Order: Ordered 8 June 1999

Data Users Guides (2 each)

1:24,000-scale DLG
DEM

Open File Report (1 copy)

OFR on Middle Rio Grande project

Circulars (1 each):

C1104 Summary of selected computer programs produced by the U.S. Geological Survey for simulation of ground-water flow and quality. 1994*

C1126 Dams and rivers; a primer on the downstream effects of dams. 1996

Fact/Information Sheets:

Abandoned Mine Lands	FS 095-99	(100)	
Digital Elevation Models			(400)
Digital Line Graphs			(300)
Digital Orthophotoquads			(400)
Digital Products Online	(Joseph has)		(200)
Digital Raster Graphics			(400)
Educational Materials from the USGS	FS-225-96		(150)
Front Range Infrastructure Resources	FS 126-98		(100)
Front Range Infra	FS 127-98		(100)
GeoData Order Form		(250)	
GIP list	(Joseph has)	(100)	
GLIS			(100)
GNIS			(25)
How to Obtain Aerial Photographs			(50)
Innovative Partnerships			(150)
Land Cover Characterization Program			(35)
LizardTech CRADA	(Mara)	(50)	
Map Dealer List for California		(10)	
Microsoft CRADA	(Mara)	(150)	
Middle Rio Grande FS 034-97			(75)
NAPP brochure and ordering info			(20)
National Atlas of USGS partnership opportunities		(150)	
National Digital Orthophoto Program		(25)	

National Hydrography Dataset (100)
SDTS (20)
Urban Hazards (100)
USGS GeoData on the Internet (100)
USGS Information Sources FS-125-95 (200)
USGS Maps and Books order form (20)
Fact sheets for CA and NV (5 each)
Bring a *select few *
Index to Topographic and Other Published Maps for:
CA (100)
AZ (20)
WA (10)
OR (10)
NV (20)
UT (10)
NM (10)

WWW Information Sheet FS 121-96 (200)

GIPs:

Historical Landsat (Joseph has) (3)
Aerial Photographs and Satellite Images (250)
Map Projections - folded or flat (whichever is in stock) (100)
GIS OOS (250)
Topographic Map Symbols Sheets (25)
USGS: Green brochure - Unbiased Science - (Joseph has) (15)
USGS: Changing World 1998 “yearbook” (Joseph has) (2)
USGS Maps (250)

Maps -- 1 each:

Digital Landforms Map of USA

Landslide Potential Map of the USA

Earthquakes in CA and NV

HA730B Ground water atlas of the United States; Segment 1, California and Nevada. 1995

Digital Data - on CD: - Mara order

San Diego area: DEMs, DOQs, DRGs, DLGs

Joseph - - For Educational Expo, Workshops, and User Demos:

Implementation of ArcView GIS in Education		(50)
The Effectiveness of GIS In Education		(50)
National Survey of GIS In Education	(50)	
Poster of GIS at Boulder HS	(2)	
Map Projections		(50)
Exploring Maps		(30)
Global Change		(30)
Map Adventures		(30)
People and Land: Finding A Balance	(30)	
Volcanoes		(30)
What Do Maps Show	(30)	

Other

ESIC business cards (Mara)	(100)	
ESIC request forms (Mara)		(100)
NMD strategic plan (Mara)		(4)
USGS Strategic plan (Mara)		(4)
Making a Difference (Joseph)	(5)	
Our customized geospatial USGS WWW resource page		(50)
GAP analysis books		(5)
Postcards of I-2206 map		(250)
Postcards of Natural Hazards (Joseph has)	(250)	
NBII packet (Joseph has)		(1)
1 page handouts of DOQ--Arc/Info info sheet (Joseph has)	(100)	
1 page handouts of DOQ status graphics (we need to get from Dave/Lisa)		(100)
1 page handouts of Using USGS DOQs in GIS (Joseph has)		(100)
1 page handout of Using SDTS DLGs in ArcView	(50)	

Also: Bring business cards, velcro, tape, rubber bands, scissors, knife, FedEx labels

end